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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,594	03/29/2004	Adam Richards .	1419	3210

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EXAMINER
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ART UNIT	PAPER NUMBER
2134	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/812,594	RICHARDS, ADAM
	Examiner	Art Unit
	David Y. Jung	2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☐ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) *1-30* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *7/2004*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

CLAIMS PRESENTED

Claims 1-30 are presented.

Cited Prior Art

The art made of record and not relied upon is considered pertinent to applicant's disclosure. The art disclosed general background.

In the cited article (http://www.cio.com.au/index.php/id;77645788;fp;;fpid;;pf;1) which is the online archive of a CIO magazine article, "Adam Richards" of Charles Schwab, namesake or possibly the inventor himself of this patent application, mentions the need for high network capacity. Furthermore, Richards is quoted as discussing a move from batch to real time system. Indeed, the use of the identifiers using volatile storage in a database situation (as in claims) is certainly a big issue in real time systems. Furthermore, a move from batch to real time would mean a change in checkpointing. Lin (reference relied in the rejection) notes two types of checkpointing in distributed database systems: (1) log marking and (2) dump. Because a batch is often non time sequential, a batch may intuitively seem to be better suited to be converted to dump (which may permit nonsynchronized data, just as a batch) checkpointing than to log marking checkpointing. In any case, the claims permit identifiers to be issued for both transactions and non-transaction records. Thus, a dump checkpointing was assumed in the combination noted in the rejections (for simpler discussion only). The

Office does not assert that a dump checkpointing is the only possible checkpointing

(only that a discussion would become more complicated for log marking checkpointing).

CLAIM REJECTIONS

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Alvarez (De La Puente, Mejia-Alvarez; Predictability and Responsiveness of Fault

Recovery Operations in Real-Time Systems; Proc. 18th IEEE Real TIme Systems

Symposium, work in progress sessions, pages 15-18, 1997) and Lin (A Survey of

Distributed Database Checkpointing; Journal of Distributed and Parallel Databases

ISSN 0926-8782 (Print) 1573-7578 (Online) Volume 5, Number 3 / July, 1997, Pages

289-319).

Regarding claim 1, Lin teaches "A method of providing an identifier of a database

record, the method comprising: receiving a request for the identifier of the database

record; generating a first value responsive to a second value stored [ ]; and responsive

to the receiving the request step, providing the first value for use as the identifier of the database record (section 4.2.9 Lin, i.e., loosely synchronized local fuzzy checkpointing – such checkpointing would create such identifiers (checkpoints) in such database context)."

These passages of Lin do not teach "solely in volatile storage" in the sense of the claim.

Alvarez teaches "solely in volatile storage (page 16, section Checkpointing, i.e., every task (which, in real time system, uses volatile storage) includes an additional processing .... Checkpoints ..." for the motivation of having fault recovery in real time systems.

Hence, it would have been obvious to those of ordinary skill in the art at the time of the claimed invention to combine the teachings of Alvarez and Lin for the motivation noted in the previous paragraphs so as to teach the claimed invention.

Regarding claims 2-10, note as follows.

Claims

2, 3: such operating systems are well known in the art for the motivation of interprocess communication and task management.

4: such sending the value to the application before storing the value is well known and is the heart of dump methodology as described above. By storing the value after the value is sent to the application, the dump creates the checkpoint (using the identifier) that correctly indicates that the value had already been sent to the application beforehand.

5, 6: such transaction (including security) is the usual and perhaps the main type of database record handling.

7: such separately requesting a second value and storing is well known for safer/efficient/redundant storage. Such storage would obviously permit easier access when restoring of the database.

8, 9, 10: Storing such range (highest and lowest) and time (timestamp) and condition (failure) are the very purpose of checkpointing. Without such storing, a full checkpointing cannot function.

Regarding claims 11-20, these claims are computer program product analogs of claims 1-10. For the reasons noted in the rejections of claims 1-10, these claims 11-20 are unpatentable.

Regarding claims 21-30, these claims are system analogs of claims 1-10. For the reasons noted in the rejections of claims 1-10, these claims 21-30 are unpatentable.

Conclusion

Points of Contact

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for formal communications intended for entry)

Or:

(571) 273-3836 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Jung whose telephone number is (571) 272-3836 or Kambiz Zand whose telephone number is (272) 272-3811.

David Jung

Patent Examiner

6/3/07